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No. 3.

Remedies against the Hessian Fly.

FROM THE ESSAY OF DR. FITCH.

"11. Procuring seed from uninfested districts. This measure also, is based upon the erroneous supposition that the eggs are deposited upon the grain. It can consequently be of no utility whatever as a safeguard against the Hessian fly. The measure has been fairly tested in several instances without success.

12. Sun-drying the seed.—Mr. W. H. Hill, in the *Nashville Agriculturist* of 1842, states that for fifteen years his wheat crops had not been injured by the Hessian fly, whilst those of his neighbors had suffered more or less. This immunity he attributes to two causes; exposing his seed to the sun for two days previous to sowing it, and sowing none but the largest and fullest grains, the others being separated by a sieve.—Doubtless stronger roots and a more vigorous growth is obtained by sowing large, plump seed. We think that effectually drying the seed in the sun can have but one effect, that of retarding its germination a short time—an end that may be equally as well attained, and with less trouble by deferring the sowing until a somewhat later period.

13. Drawing elder bushes over the young plants.—We have here one of the fancies of a former day, it being supposed that elder possessed an odor or some more occult property, which rendered it peculiarly repulsive to insects. A trial of it against the Hessian fly, however, soon demonstrated that it possessed little or no virtue of that kind in reference to this insect. If any benefit ever resulted from it, it was probably only by dislodging and brushing off some of the eggs from the blades of the wheat.

14. Sprinkling fine salt, ashes, or caustic lime over the young plants.—The first of these measures was proposed, from its appearing at one time that wheat growing upon points of land exposed to the sea air was less injured than that growing back from the coast. Neither of these remedies however, has been attended with success, in any

case on record, and they probably are of no service whatever, except as they may slightly increase the fertility of some fields. There is no likelihood that the fly, its eggs, or larvæ can be materially discommoded by them.

15. Burning and plowing up the wheat stubble. This measure was originally proposed by Judge Havens, and has been unanimously approved of and strongly urged by several of the most intelligent writers since. Indeed, a slight examination can scarcely fail of impressing upon every one its utility, independent of the sanction of authority. Whoever will at or soon after harvest, inspect the stubble of a field that has been badly infested by the Hessian fly, will find these insects in their flax seed state lying one, two, three or more, at the joints of perhaps half the straws of the field. What a trifling labor, or rather what a pastime will it now be to set fire to this dry stubble and hereby inevitably consume countless thousands of these destroyers. This point appears so plainly evident, that no one we think will hesitate in pronouncing this remedy decidedly the most important and valuable of all. But a thought breaks in upon us, of such fearful import, that fancying we see the burning brand extended, in an instant more to send a sheet of vivid flame, leaping, hissing, and cracking over the fated field, we involuntarily shout

"Stop! or thy tread is on an empire's dust!"

of a truth, what a short sighted mortal is man, and how often are the words of the poet verified, that "a little knowledge is a dangerous thing."—Seeing his enemy chained to the stake, he exultingly rushes at once to fire the faggots, and lo, a dozen of his friends are immolated upon the same pyre! Is it not a fact, that whilst by this measure we consume the Hessian fly by hundreds, we inevitably destroy its mortal foes by thousands? And that the very means which we thus resort to for averting a future calamity are the surest means that could be devised for bringing that calamity upon us! If nine tenths of every generation of the Hessian fly are destroyed by three or four other insects, who can calculate the

value of the services which these latter are yearly rendering us. And who, then, will be so inconsiderate and ruthless as to destroy *nine* of these useful parasites, in order to exterminate *one* Hessian fly! Yet this must in most cases be the result of burning the stubble of the wheat field. We commenced our account of this remedy impressed with a belief that it was the best that had ever been proposed; we close it, persuaded that it is the very worst."

REMARKS BY THE EDITOR.—We cannot altogether join in our author's sudden apprehension in regard to the consequences of the last remedy. Admitting that the friendly parasites, as well as the Hessian fly, would be destroyed by burning the stubble, what follows? Only, that the work of the parasite would be more speedily and certainly performed without its aid. If the enemy be but annihilated, what matters it by what instrumentality it happens. According to the statements of our author and other naturalists, at the time proposed for accomplishing this work, directly after harvest, nearly the whole race of the Hessian fly is contained in the stubble in the flax seed state. The fall brood, which passed the winter at or below the surface of the ground, and came forth in the form of flies early in the spring, have ended their existence, leaving their progeny in the first and second, and a few in the third joints of the straw, ready, if left undisturbed, to issue forth as flies, for the most part, the last of July, and in August. With the exception of those that may have come forth previous to or during the harvest, (and these will have passed away before seed sowing, since the duration of the insect in the fly state is found to be but about a week or less,) and those that may have been carried off the field in the sheaves,—the number of which, if the stubble be left high, would be very few, and these doubtless be attended by their parasites,—the whole race is before us, and at our mercy. Shall we refrain from the ready means of destruction within our reach, because, by helping ourselves, we shall destroy the means by which nature was preparing to help us?

The objections to the use of this remedy, apply, we think, with about equal force, to some others that have been named,—such as using wheat as a decoy and plowing under, rolling and mowing, and indeed, in some sort, to every mode by which we may attempt to destroy the insect; for the multiplication and very existence of the

parasite depend, of course, on that of its prey.—We must, therefore, until experiment shall have shown the contrary, still consider this remedy worthy of being regarded with its former favor, notwithstanding our author's very animated decision against it.

The enumeration of the remedies against the Hessian fly is here closed. Dr. Fitch deserves the thanks of wheat-growers for his admirable treatise, which throws a fuller light upon the subject it investigates than any previous work. We hope he will carry out the intention he expresses, of pursuing further the history of the Cecidomyian parasites.

For the Michigan Farmer.

The Coming Wheat Crop.

MR. EDITOR:—The coming wheat crop in this part of the state—the west part of the counties of Ionia and the east part of Kent—taken as a whole, looks well—seldom better. Prior to the late heavy and timely rains, many of our farmers entertained fearful apprehensions as to any considerable yield. But now, I am very happy to say that, but a *very little* having been winter killed or in any way materially injured, the prospect is that the harvest will not only be usually early, but one that will richly compensate the husbandman for his hard, honest and well-spent labor.

OTISCO.

April 28th, 1847.

For the Michigan Farmer.

On Inverting Posts.

MR. EDITOR:—It is firmly believed by many that posts, when set in the earth, should be inverted. The reason assigned in support of this belief, is that they will thereby be much more durable. If it be really true that the same posts simply by being set with the *top downwards*, will last considerably longer, it is certainly of great moment that the fact becomes well and generally known. In order to convince the public mind that such is the case, accounts of several experiments, have already been promulgated, all of which so far as I have seen or heard, concur in the support of this conviction. Notwithstanding the number seems to me to be sufficiently large to compel all reasonable doubts to give way under their accumulated weight, still I will venture to give publicity to an additional experiment, tried by a gentleman who is now a resident of this township. In a conversation with him a few days since, he informed me that some twenty years ago, when residing in the town of Ashfield, Mass. he set a couple of gate-posts, both of which were taken from the butt of a chestnut tree, which was perfectly sound. One of them was, and the other was not inverted. At the expiration of 12

years, both were taken up, when he found that of the one that was inverted, only the alburnum or sappy part was decayed, while the other had nearly rotted off.

A few experiments, or considerable careful, judicious inquiry, would probably be sufficient to convince the incredulous; and, perhaps, to determine the correctness of the theory already put forth upon this highly interesting and important subject.

Orisco.

April 28th, 1847.

From Mrs. Childs "Frugal Housewife."

Items of Domestic Economy.

If you have a greater quantity of cheeses in the house than is likely to be soon used, cover them carefully with paper, fastened on with flour paste, so as to exclude the air. In this way they may be kept free from insects for years. They should be kept in a dry cool place.

Pack sweet June butter in a clean, scalded firkin, cover it with strong brine, and spread a cloth all over the top, and it will keep good until the Jews get into Grand Isle. If you happen to have a bit of saltpetre, dissolve it with the brine. Dairy women say that butter comes more easily, and has a peculiar hardness and sweetness, if the cream is scalded and strained before it is used. The cream should stand down cellar over night, after being scalded, that it may get perfectly cold.

About the last of May, or the first of June, the little millers which lay moth-eggs begin to appear. Therefore brush all your woollens, and pack them away in a dark place covered with linen. Pepper, red-cedar chips, tobacco,—indeed, almost any strong spicy smell,—is good to keep moths out of your chests and drawers. But nothing is so good as camphor. Sprinkle your woollens with camphorated spirit, and scatter pieces of camphor gum among them, and you will never be troubled with moths.

It is thought to be a preventive to the unhealthy influence of cucumbers to cut the slices very thin, and drop each one into cold water as you cut it. A few minutes in the water takes out a large portion of the slimy matter, so injurious to health. They should be eaten with high seasoning.

Lime pulverized, sifted through coarse muslin, and stirred up tolerably thick in white of eggs, makes a strong cement for glass or china. Plaster of Paris is still better. It should be stirred up by the spoonful, as it is wanted.

Honey may be separated from the comb, by placing it in the hot sun, or before the fire, with two or three colanders or sieves, each finer than the other, under it.

In Canada, they cut the skin of potatoes all off, and put them in pans, to be cooked over a stove, by steam. Those who have eaten them, say they are mealy and white, looking like large snowballs when brought upon the table. Potatoes boil-

ed mashed while hot, are good to use in making short cakes and puddings; they save flour, and less shortening is necessary.

When green peas have become old and yellow, they may be made tender and green by sprinkling in a pinch or two of pearlash, while they are boiling. Pearlash has the same effect upon all summer vegetables, rendered tough by being too old. If your well water is very hard, it is always an advantage to use a little pearlash in cooking.

Put in no green vegetables till the water boils, if you would keep all their sweetness.

Branding Sheep.

There is great waste of time in *branding* or *marking sheep*, to say nothing of the trouble it gives the manufacturer to clip off the tar from one or more large letters. The proper place to brand is on the top of the rump; that the mark may be seen from any position the sheep may chance to be in, and that it may not be obliterated by their crowding together. The size of the letter need not exceed two inches in length, and should be put on without handling the sheep at all. The tar should be in a shallow vessel with a handle; the sheep should be in a close pen, (easily made with feeding boxes,) when they may be branded and counted in a very short time, without laying hands on them.—*Cor. of Cult.*

From the Ohio Cultivator.

Culture of the Ruta Baga.

A correspondent of yours asks the proper method of cultivating the ruta бага. I have cultivated them for years, and in nearly every way. I have received a premium or two from the State Society for large crops, and raised larger ones for which I have made no application for premiums. For ten years, my largest crop has been 1020 bushels per acre—my smallest, 850—the average, say 900. I will most readily give your correspondent the benefit of my experience.

The largest crop I have ever raised, was on stubble, plowed two or three times prior to seeding. The land was plowed very deep, with a narrow furrow-slice. Furrows were struck thirty inches apart, with an ordinary plow, and about sixty loads of good farm-yard manure dropped in the furrows. The furrows were then covered by turning a furrow-slice on them each way, with a small corn plow. This left a small ridge over the original furrows, which was filled with manure. These ridges were levelled down to nearly the surrounding surface, and the stones and lumps removed from them by a coarse rake, with spike nails for teeth. The seed was then drilled in on the centre of these ridges, and they were rolled down with a hand-roller. For some reason or other, all the seed did not sprout well, and there were several vacant spaces of several yards in length. The roots were thinned out from eight to twelve inches apart.

Land hoed twice; produce, 1020 bushels per acre, not by taking the produce of a rod and *estimating*, but by actual admeasurement of the *whole crop*. They were measured, of course, after being deprived of their tops and roots.

Last season, my crop was about 975 bushels to the acre, though the season was unfavorable, by reason of the severe and long-continued drought; and the method of culture was not, perhaps, more than two-thirds as expensive as the one above described.

An old meadow was carefully plowed a short time prior to planting. My manure was prepared by being piled up in the barn-yard a couple of months prior to using. It was piled in layers, and between each layer gypsum was freely applied. When carted out, it was in a semi-rotted state; not "pasty," nor "long" enough to clog a harrow. This was spread on the top, after plowing, and incorporated with the soil with harrows, directly as it was spread from the carts.

The seed was put in with a drill barrow near the first of June. Hoed twice after cultivator, and used cultivator twice without hoeing.

I will lay down a few rules for the cultivation of this crop, and its after management, in relation to which I feel myself almost qualified to speak *ex cathedra*, having so repeatedly tried all the methods recommended by English and American writers.

If turnips are put on stubble, the land must be plowed and dragged several times (in soils like ours,) to obtain sufficient mellowness to kill out the weeds, which are otherwise an intolerable plague.

On the whole, it is decidedly better to sow on an inverted sward, where the cost of production is taken into account.

To force forward the young plant rapidly, and thus prevent its falling a victim to the fly, it is better to apply the manure to the *surface*; and I consider the practice objectionable in no respect, if the manure is *immediately* and *thoroughly* incorporated with the soil by the harrow. It requires but a *thin* coating of soil to absorb the ammonia of the manure, as all know who are at all conversant with the subject. I believe the same practice will be found preferable with Indian corn.

The seed of ruta бага should be got in early; in this climate, near the first of June. Early planted roots invariably attain the greatest size, and if cut off by the fly, you have time for a second seeding. But if planted pretty thick—say from a pound to a pound and a half of seed to the acre, (I prefer about 1½ lb.) and *forced* forward by manure on the surface, I have never known them destroyed by the fly.

Soaking the seed in curriers' oil has been considered a prevention against the fly. I have so considered it, and my statements to that effect have been published in our State Society's Transactions. But more numerous and accurately conducted experiments have led me to doubt the cor-

rectness of my previous opinions. I have abandoned the application of the oil, or any other substance to or with the seed. Some recommend the drilling in of sulphur with the seeds. I have no confidence in it. I depend entirely upon plenty of seed and early forcing.

Turnips should be hoed, at all events, as soon as they are in the second leaf, and sooner, if the weeds make their appearance. If the weeds are suffered to get the start of the turnips, overtopping them, it is the hardest, most vexatious, and unprofitable labor in the world to manage the crop.

Experience, you know, is a capital instructor, though the *tuition* sometimes comes rather *high*. I have *feeling* recollections on this point. To your correspondent, and to all others "to whom these presents shall come," I would emphatically say that an *early first hoeing* is what the lawyers would call a *sine qua non* in turnip culture. If in second leaf, thin them out at the first hoeing. If not, and particularly if the fly has commenced its attacks, defer it for a few days. The cultivator is always used prior to hoeing—the plow never. The plants want no hilling up, and there should be no furrows made between them. The second hoeing should always take place when the weeds are small. Two hoeings, if thoroughly done, usually suffice. It is well to give them a subsequent dressing or two with the cultivator, but not after the tops get long enough to be much broken in the operation.

Now for harvesting: I have tried nearly every conceivable method—keeping an account of the cost. I have cut the tops off with a hoe, having the roots subsequently pulled with a turnip hook.

This makes it slow and unhandy to pick up the turnips to cut-off the roots; and if this latter operation is performed with the hoe on the ground, it is done in a slovenly and imperfect manner.

I have had them pulled by hand and thrown into heaps. It is very hard work to pull them by hand, especially if grown on green sward.

Latterly, I have had one man pull them with a turnip-hook: another follows him, who clutches one or two of them by their tops with each hand, strikes them together two or three times, to shake out the dirt, places two rows together, with the roots the same way, and the next two rows close to them, with the roots pointing inward, (i. e. towards the roots of the other two rows.) Two men follow along this "swath," each armed with a heavy-bladed knife, somewhat heavier than a carving-knife. The turnip is clutched by the top, and the roots severed by one or more blows. It is then tossed so as to catch the bulb on the hand, with the top turned or reversed—and this is severed at a blow, and the bulb cast forward into a heap. Two men follow with a wagon, picking up and carrying off the roots. Six men and a span of horses, will, if the turnip house is near and convenient, and the crop good, secure 600

bushels of roots per day. A boy should follow the "swaths," with a pitchfork, and throw together the unwilted tops, into little cocks, which will keep good in that condition to feed out for a month or two.

I have discovered, the last season, one "crowning improvement on this process. By taking a subsoil plow, and arranging the clevis so as to let the landside pass a little to the left of the turnips in the row, I found the share would lift the turnips out of their beds, letting them settle back, standing up so that the tops were not even soiled! A span of horses can thus be made to pull the turnips as fast as they can walk over the rows.

Turnips should be harvested in dry weather.

A word about storing—for here has been much trouble and disappointment. They must not be put in tight cellars, covered with dwelling houses or barns—that is, not in large quantities; if so, they will sweat and heat, and the stench from it will become intolerable. The only good place for storing them which I have tried, is a cellar excavated about 3½ feet, the sides walled up to the surface of the ground, and then rafters and roof laid above ground. The roof is covered with dirt, to prevent freezing. In one end is a door, to which you descend by two or three steps; in the other, a window above the ground.

The turnips are rolled down a trough, through the window and door, from the wagon.

The window and door are left open for the air to circulate through, until cold weather sets in.

I am now daily feeding out bushels of them, kept in such a cellar, as sound and sweet as when first put in, and they will continue so a month or more longer.

HENRY S. RANDALL.

Cortlandville, N. Y., April 27.

Diseases of Sheep.

Hoove, or distension of the stomach by gas.

This cannot be considered a disease, but an impediment of respiration and circulation. It is occasioned by the sheep being changed from a poor pasture to a luxuriant one, and gorging itself to an immoderate degree. The gullet is obstructed, and the gases in the paunch cause remarkable distension, with no passage for their escape, except into the chest, which ends in suffocation of the animal.

Treatment.—An aperture is sometimes made with a sharp instrument in the side to permit the passage of the gas; but this Blacklock explicitly condemns. The remedy is the *probang*, a flexible rod, with a small ball of wood or ivory at the end, which, being forced to the lower extremity of the gullet, removes the obstruction, and the gas or wind is readily voided.

Prevention.—Change the flock often, and neither a poor pasture nor too rich a one will follow. But peradventure it happens that sheep must suddenly on too high keep, salt them

freely before it takes place, and this should be repeated for several successive days.—*American Shepherd.*

STRETCHES.

This disease very commonly occurs in flocks which are kept exclusively on hay, or other dry food, and is fatal very often, unless an early application of medicine follows the attack.

Symptoms.—The sheep will alternately lie down and rise at brief intervals, frequently stretching, and refuses every kind of food. It is now generally admitted that it proceeds from *costiveness*, by being deprived wholly of green food. The disease is unknown in Great Britain, where succulent provender is so bountifully fed.

Treatment.—Two table-spoonfuls of castor oil, or one ounce of Epsom salts, will be effectual.—A small quantity of hog's lard has also been used with success. A neighbor administers a large quid of tobacco; and he recently informed the writer that he had never lost a sheep by the stretches after administering this nauseous potion.

Preventive.—Give the flock green food once a week or oftener—such as apples, potatoes, or turnips. Pine or hemlock boughs are also excellent.

DIARRHŒA, OR SCOURS.

This being so common and fatal a disease with the junior portions of the flock, in our own country, requires an extended notice. The following are Mr. Youatt's remarks, and mode of treatment:

"If the affections of the external coats of the intestines do not frequently occur, inflammation of the inner coat or mucous membrane is the very pest of sheep. When it is confined principally to the mucous membrane of the small intestines, and is not attended by much fever, it is termed *diarrhœa*; when there is inflammation of the large intestines, attended by fever, and considerable discharge of mucus, and occasionally of blood, it is *dysentery*. These diseases are seldom perfectly separate, and diarrhœa is too apt to degenerate into dysentery. The diarrhœa of lambs is a dreadfully fatal disease. If they are incautiously exposed to the cold, or the mother's milk is not good, or if they are suckled by a foster-mother that had yeaned too long before, a violent purging will suddenly come on, and destroy them in less than twenty-four hours.

"When the lamb begins to crop the grass at his mother's side he is liable to occasional disturbance of the bowels; but as he gains strength, the danger attendant on the disease diminishes. At weaning-time care must sometimes be taken of him. Let not, however, the farmer be in haste to stop every little looseness of the bowels. It is in these young animals the almost necessary accompaniment or consequence of every change of diet, and almost of situation; and it is frequently a sanative process; but if it continues longer than twenty-four hours—if it is attended

with pain—if much mucus is discharged—if the appetite of the animal is failing him in the slightest degree, it will be necessary to attend to the case. Then use the following remedy:—Take of prepared chalk an ounce, powdered catechu half an ounce, powdered ginger two drachms, and powdered opium half a drachm; mix them with half a pint of peppermint water. The dose is from one to two table-spoonfuls morning and night.

“The diarrhoea of lambs is, in a majority of cases, attributable to the carelessness or mismanagement of the farmer, either referrible to deficient or improper food, or the want of shelter at an early age; as the animal grows up he is better able to struggle with the disease.

“Diarrhoea occasionally attacks the full-grown sheep, and is too often fatal, especially when it has degenerated into dysentery. It is very common in the spring, and particularly in the early part of the season, when the new grass begins rapidly to sprout. Here, still more decidedly than with the lambs, the sheep proprietor is urged not too suddenly to interfere with a natural or perhaps beneficial discharge; and after which the animal often rapidly gains condition. Four and twenty hours should pass before any decisive step is taken; but if the looseness then continues, the sheep should be removed to shorter and dryer pasture, and hay should be offered to them, if, after having tasted of the fresh grass of spring, they can be induced to touch it. If the looseness does not abate, then adopt the treatment recommended.”

With the writer's flock, diarrhoea rarely occurs with lambs when suckling the ewes; it is at an after age, generally during their first winter, and early in the following spring, when they commence nipping the young grass:

The disease originates under the following circumstances:

First. Too sudden a change from dry to green food. Therefore, as has already been remarked in a previous part of this work, when the foddering season is about to expire, the flock should not be allowed to go wholly to grass, but permitted to eat only a little each day for a week or more; then the sheep may be placed on their pastures permanently, with impunity.

Second. Salting freely too early in the spring, while the grass is young and flashy.

Third. When beginning to feed grain, giving it in too large quantities. It should be fed moderately at first, and the quantity gradually increased.

Fourth. Feeding unripe hay. This is not generally known as an inducing cause of scours; but the compiler *knows* it to be so from sad experience, and the fact has been repeatedly confirmed by the experience of farmers living in the vicinity of his residence. In this country, it is probably the most prominent cause of the disease.

Fifth. Exposure to sudden transitions of weather;

shelters are therefore needed as a preventive.

Sixth. Eating of irritating weeds; the flock in this case cannot be removed too quickly to another field, and salted.

Diarrhoea can be easily arrested, by mixing a small quantity of pulverized alum in wheat bran, and fed for a day or two. If this should not succeed, there is a tendency to dysentery, and a purgative of castor oil (a table-spoonful) should be administered, accompanied with dry food, and little drink. The reader is also referred to Mr. Youatt's recipe, already stated. A decoction of hemlock bark, after boiling, is a powerful astringent, and has been used with success.

Retarding Peach Blossoms.

I wish to say a few words upon the preservation of the blossom buds of peach trees from destruction during the winter. I have, in an adjoining township, remarked for several years, two peach trees to be heavily laden with fruit, when the blossom buds upon the trees in the surrounding country had been killed by frost. These two had no advantage of soil over others, and none of location, except that they stood on the north side of a board fence, which was about four and a half feet high. The owner informed me that he had been in the habit of throwing around them chips or “*swingling tow*,” while the ground was frozen, to retain the frost there. A highly intelligent gentleman informed me that he had practiced for years, heaping snow around his trees, without deriving the least benefit from it, and thought the practice was rather injurious to the trees. Relying upon his testimony, I have concluded that the fence is more to be depended on for protection, than any temporary covering of the roots, especially as the fruit buds are sometimes so far developed in the autumn as to be killed by the first severe frosts of winter. The partial shelter from the rays of the sun, afforded by a high, close board fence, during the autumn, the thaws of winter, and of early spring, to the trunks and branches, as well as the roots of trees, will I think, often form a sufficient protection.—*Wm. Andrews in the Horticulturist.*

Cooking Onions.—A female correspondent says:—“I would like to tell you of an improved mode of cooking onions. When you boil them, soak them in a plenty of cold water two or three hours before boiling, take them out, put them in fresh water to boil; when about half done, turn off the water, and add more, (cold water will do, but hot is better;) then finish the boiling. By this means you will get rid of most of that unpleasant odour, so peculiar to onions. Soaking in cold water, as above, is also serviceable when they are to be fried.”

Observations on Sheep.

MESSRS. EDITORS:—During a short visit in Connecticut, the past month, I had the pleasure of examining the Merino flocks of Messrs. Blakeslee, Nettleton, Merriman, Hickox, and Matoon, of Watertown, and Messrs. Atwood and Smith, of Woodbury, Ct. I found all of these gentlemen in possession of sheep that embody many of the valuable qualities for the production of wool. But those qualities are combined in different proportions, each flock having their own peculiar traits of excellence; all of which show how much the character of a flock can be moulded to the taste of a skillful breeder.

Mr. Blakeslee's sheep are of fair size and shape, with a thick coating of wool of good length upon all parts of the body, and for fineness are perhaps unsurpassed by any pure Merino. It is Mr. Blakeslee's practice to shear his lambs in August, consequently the average weight of the fleeces of his flock is not as high as it would be if his yearlings had a year's growth of wool. Mr. Atwood's sheep are of a good quality, and truly remarkable for constitution, form, and weight of the fleece. Mr. Nettleton's sheep are in several respects rather a medium between Messrs. Atwood and Blakeslee's. The owners of the other named flocks being absent, and some of their sheep in open fields, I did not so thoroughly examine them, but they appeared like good sheep, with characteristics similar to those already named. There is also a strong family resemblance among the members of each of those flocks, which is another index of a systematic course of breeding. Yet there is a perceptible difference between what might be termed the best, an average, and the poorest. The fact is, there are seldom any large flocks so good but what we may select individuals that are comparatively poor, and seldom any flocks so poor that they do not contain a few good sheep. To judge of the real character of a flock we want to see the whole flock, or if we see a few individuals only, we want to know their true comparative rank.

I had also the satisfaction of examining the importation of Mr. Taintor, of Hartford, Ct.—Here we find size and form of carcass excelling anything I ever witnessed in the Merino race, and for constitution and weight of fleece they are of nearly a corresponding degree of merit. These sheep are another illustration of what may be brought about by a marked course of feeding and breeding. Were those sheep as fine as many other Merinos, they would be the most valuable stock in the country, and could the ewes be crossed with fine woolled rams, it would, in my opinion, add much to the value of the stock, as size is a point that may be attained without impairing other qualities, through the medium of the dam, and the outward coating and quality of the wool through the influence of the sire.

From a personal inspection of some of the most noted flocks, and the combined offspring of

the same flocks of equal merit, I am satisfied that the progress of our best flocks is frequently retarded by "in-and-in breeding." I am the more strongly confirmed in this opinion, from the fact, that in the examination of sheep that have been bred in this manner for a series of years, it will generally be observed that the oldest sheep are the most valuable stock. These observations, with my own experience, have caused me to place much confidence in the utility of making frequent crosses with the blood of other families of the same breed, provided that the blood is superior, or equally as good as our own. It not unfrequently happens that the characteristics of two flocks equally valuable, are such that the imperfections of one would be counteracted by the perfections of the other, and by uniting the blood of the two, many of the offspring would surpass the parents on either side.

I find, by conversing with wool-growers in various sections of the country, that many of these are ever jealous of the purity of such flocks as are claimed to be of pure Spanish origin. Those having the finest wool are suspected to be of a Saxon mixture, and those having the heaviest fleeces, are suspected of being crossed with native. It is perhaps too frequently the case that there is some just cause for these insinuations; but the bare fact that some flocks produce very fine wool, and others very heavy fleeces, is no sure evidence that they are grade sheep; for all this can be brought about by management in feeding and breeding, and still preserve the purity of Spanish blood. I believe the pure Merino, in their most valuable state, have both fine and heavy fleeces, and the country now affords many scattering specimens, and occasionally flocks in which these qualities are combined to a high degree. The reason why such are not as numerous as those of a medium and ordinary character, is not because we are not abundantly supplied with the materials for making them so; but it is because the breeders of domestic animals do not sufficiently exercise their own faculties and means, to acquire that knowledge, skill, and energy which are requisite in order to operate with the best success upon those materials. No one can become a successful breeder without having a quick perception of those external marks and qualities which indicate the true worth of an animal, and are an indispensable guide for making judicious selections. Then with a thorough acquaintance with the principles of breeding, selection, and crossing, we can combine, modify, improve and propagate those qualities, giving the progeny the most perfect and valuable organization; and if the thing is practicable, each succeeding issue will be an improvement upon the preceding.

The prominent objections to many of our flocks, are more the results of injudicious breeding than any natural defect in the original blood. There is no doubt in my mind, but that in the pure Spanish Merinos, we have all of the natural ele-

ments for producing better sheep and more valuable fleeces than ever have been bred in this or any other country. All that is wanted is a more perfect and uniform development of all of the valuable qualities among the members of one flock; or in other words, a consolidation of those individual traits for which many flocks have already gained a merited reputation. This can only be accomplished by time and perseverance, in crossing and re-crossing the very best animals upon the most correct principles of breeding. I will venture to predict, that if wool-growers would thoroughly study the defects and merits of their sheep, and acquaint themselves with the best practical means of diminishing the one, preserving and improving the other, they might in a few years increase the value of a large proportion of their flocks one-third, without any additional expense in feeding. If any think this impracticable, I would refer them to the difference in the annual returns between ordinary and choice flocks of the same breed. While the cash value of the fleeces of many flocks the past season has averaged no more than seventy-five cents each, that of others has been a dollar and twenty-five cents, a dollar and fifty cents, and a dollar and seventy-five cents. The cash sales from one of my flocks of breeding ewes, one hundred in number, averaged a dollar and fifty-eight cents per fleece; from thirty-one breeding ewes, a dollar and ninety-six cents; from twenty-five yearling ewes, a dollar and fifty-six cents. The two last named flocks, were sheep selected previous to shearing. The cash value of the fleeces of a hundred and forty-four yearlings, (my lambs,) was a dollar and forty-two cents each.

EBEN'R BRIDGE.

Pomfret, Windsor Co., Vt., March, 1847.

Hints for the Season.

Exterminating Canada thistles, and other noxious weeds.—The general principle that plants cannot long survive the continued destruction of their tops, furnishes a guide to the cultivator in his efforts to rid his fields of such as are injurious. The fact that the leaves perform in the vegetable economy the same office with lungs in the animal, exposing the sap to the atmosphere to undergo a chemical change which prepares it to perform its functions in the circulation, and that, without leaves, this necessary circulation cannot take place, instructs us that any process by which the head can be kept down and the putting forth of leaves be prevented, will sooner or later be efficient in the destruction of the plant. Hence repeated plowings, or frequent decapitation at the surface of the ground, at the season when nature is stimulating to active growth, has been successfully practiced. We last year published a method of destroying the Canada thistle,

used by a New York farmer, which consisted in plowing them under thoroughly just as they blossomed, and repeating the plowing, at intervals of about three weeks, until the field had been plowed the fourth time. Their destruction was then complete, and the ground well fitted for a crop of fall grain. A writer in an old volume of the N. E. Farmer gives the following directions:—"Manure your land, and sow it with oats, clover and herds' grass. When the oats are in the milk, cut them, thistle and all, dry and mow them up for fodder; taking care to use them early in the season, or the rats will get the start of you. Such of the thistles as are in the blossom at the time of cutting, will have their stalks hallow; and the rain, retained in their stumps, stagnates in hot weather, ferments with the juices of the plant, and brings on decay and death. The younger shoots will continue to grow till the grass forms a sufficient sward to check them, when being mown in the blossom, they all perish; and by the time the ground needs plowing again, provided there are no stumps to keep it loose and open, the thistle will entirely disappear. In this manner, like a quack's patient, this plant may be made to pay for its own destruction. The practice of cutting and leaving the thistles on the ground is not good, as besides the loss of the fodder, their decay enriches and loosens the soil, prevents the sward from forming, and encourages the growth of the plant."

It may be remarked that when the mowing or plowing under of this or other noxious weeds, is done in a very dry season, the roots, already exhausted by the growth of the plant have generally not sufficient vigor to send up new stalks, and they consequently die out.

Deep plowing for a summer fallow.—When the surface soil has become much exhausted by the *skinning* system of farming, a bountiful crop has been sometimes obtained merely by turning up two inches of heretofore unworked soil at the first plowing of a summer fallow, letting it become ameliorated by exposure to the air, and intermixed with the old soil by subsequent plowings and harrowings. The plan of deep culture for wheat on lands that have been "brought to," is recommended, whether the soil be wet or dry, light or heavy. If wet, the superfluous moisture can more readily sink below the surface,—if dry, moisture will ascend from below, in a season of drouth, by capillary

attraction, and the process of evaporation. When wheat plants are allowed to strike their roots deep, they are better enabled to sustain the attacks of the fly, and it may be presumed are less liable to be winter killed. If clover is designed to be sown with or on wheat, the advantage of a soil which has been subjected to deep tillage, and will allow the tap roots a free course downward, is very great; as will obviously appear when we consider the unproductive nature of most sub-soils which have never seen the light.

Time for cutting grass.—Some diversity of opinion exists among practical farmers as to the best time for cutting grass—some recommending the period of blossoming, others preferring to wait till the seed is fully formed. An account was somewhat extensively copied in the Agricultural papers two years since, which stated that late cutting was more beneficial to a meadow than early—so much so that run down meadows could be restored to productiveness merely by adopting for two or three seasons the former practice. This would seem improbable when we consider that the process of nature from the blossoming to the perfecting of the seed is a very exhausting one. The asserted fact upon which the recommendation was founded was probably erroneous. On the contrary, it is a general rule that vegetation gathered before the formation of seed exhausts the soil but little. At the period of blossoming, plants are filled with saccharine and mucilaginous matter, and are in that state which renders them, when dried, most easily digested, and the most nutritious food for animals. In the discussions which have been had on this point in the various farmers' clubs in the Eastern States, the weight of authority and testimony has gone greatly in favor of cutting before the blossom has disappeared. This, it is well known, is the period chosen for the gathering of medicinal plants, whose virtues it is desired to preserve.—Another consideration in favor of early cutting is, that the aftermath is more abundant.

Watering Plants. With the exception of house plants, and of garden vegetables newly transplanted, the watering of plants is not, as a general rule, approved by the best horticulturists. If the soil has been well prepared at the outset of the season, and is often stirred afterwards, watering can seldom be needed. The *instinct* of the roots teaches them, in a time of drouth, to make their way downward in search of moisture; and

they thus protect themselves from injury in all ordinary cases, when the tillage has been deep and thorough enough to give them free course. But a superficial watering diverts them again towards the surface. Prof. Lindley recommends, that if watering be resorted to, it be done at considerable intervals, and then *copiously*.

To protect vines from bugs. A mixture of sulphur and soot, half and half, sprinkled on the leaves in a dewy morning, is a good application. Water in which manure from the hen-roost has been soaked—two shovels full of manure to three or four gallons of water—allowed to stand until it ferments, then a half pint poured on each hill every alternate day, has been found to keep off the bugs and greatly increase the growth of the vines. Square boxes, covered with milinet, are an effectual protection when the plants are small.

Clearing wild lands. Perchance our paper may meet the eye of some pioneers of the forest, and as the season sometimes chosen for their most active labors is at hand, we wish to offer to such a suggestion, which however obvious, the great majority utterly disregard—and that is, to leave in the vicinity of their dwellings a grove of young trees. We are aware that this is opposed to the philosophy of the new settler, whose definition of "*improvement*" is, the clearing away of every tree and shrub that before occupied the ground. We are not about to quarrel with that devotion to matters of necessity and utility, into which, as we know well from experience, men so situated naturally fall: this is right and proper, the result of circumstances. But it is well not to carry this devotion further than there is need, and we think the plea of necessity or expediency cannot be urged, when the rude habitation is robbed of the comfort and adornment of shade. In well settled countries, men of wealth and taste reverse this process, and think they provide themselves with a crowning luxury, when, at great labor and expense, they embower their residences, and plant large portions of their grounds with these natives of the forest; and they deem it the perfection of art to imitate in these plantations the hap-hazard arrangement of nature. The new settler has his park, perfectly arranged, ready furnished at his hand. He has only to leave it untouched, or at most to clear out the underbrush and other obstructions, to have a pleasure ground for his children, and a place of recreation for himself, equal to the wealthiest in the land. If

his ear has any music in it, the melody which the birds freely furnish in such a grove every fine spring morning, is like any other source of innocent pleasure, worthy of consideration. But aside from these, which some will term fanciful views, there is a matter of fact reason for our suggestion, of great moment to every settler in the west—and that is found in the fact which has been heretofore stated, as the result of repeated observation—that while the house of the emigrant has been surrounded by the forest, he and his family have been generally exempt from the peculiar diseases of the climate; but when the hot summer sun is let down upon the earth, and the dwelling stands without a leaf to shade it and absorb the exhalations which rise from the decaying vegetable matter, sickness follows as the consequence. The chemical explanation of this fact, as founded upon the office performed by leaves in purifying the air, is contained in our last number.

From the Horticulturist.

Autumn Grafting and Spring Budding.

BY ROBERT NELSON, NEWBURYPORT, MASS.

[The following interesting article is well worthy the attention of our readers. MR. NELSON is a practical Danish horticulturist, and the climate of Denmark is so much like that of New-England, and the northern part of our Union, that his experience in some points is more valuable in this country than that of European gardeners from warmer parallels of latitude.

The *autumn-grafting* and *spring-budding* described, are, we believe, most useful and excellent variations of the modes of propagating trees and shrubs, by no means generally known or practiced in America. N. LONGWORTH, Esq., of Cincinnati, has performed spring-budding with success, and drew the attention of our readers to it, by a brief note, in a previous number, (p. 145.) Besides the greater success for certain kinds of trees, which attends the modes of grafting and budding described by MR. NELSON, they are most valuable to the amateur, or commercial grower, who often receives grafts a little out of season; or who wishes by spring-budding, to produce half a dozen trees from a scion, which, if used for grafting, would only serve for one or at most two trees.—Ed.]

Grafting and budding are so well known that hardly any thing new can be said about them.—Nevertheless I hope, in communicating something of the experience of many years, that those less acquainted with these operations will find a few useful hints.

I will omit the common spring grafting on growing trees, and confine my remarks to root-grafting, described by MR. PHOENIX, on page

280 of the Horticulturist. Notwithstanding that root-grafting is, I suppose, as old as propagating plants by pieces of roots, it is not as commonly practiced, as it ought to be.

In the winter of 1835, after having visited the most celebrated gardens on the continent, I returned to my native country, Denmark, 55 deg. north latitude, and for the first time tried root-grafting. I applied this method on apples, pears, plums, cherries, peaches and apricots, with good success; Madeira nuts, filberts and roses would not take to my satisfaction, and black English mulberries would not grow at all; they were all grafted in February, and put into boxes. I thought it however difficult to keep them free from frost in the cellar, unless the latter was so warm as to cause the grafts to shoot. I therefore let the grafted roots freeze in the boxes, as soon as grafted, and placed them in an ice-house, where they remained in that temperature, I may say frozen, till the latter part of April, in very good condition. But there was another and still greater difficulty in the way, which was to get them planted sufficiently early in that busy season, when every kind of garden work must be performed; and even if this could be done, the grafts of some trees often require protection against the powerful sun, and suffer much from drouth, before they could strike roots.

Instructions for transplanting the different kinds of plants are given in the works on gardening; but much easier and plainer is it to follow the hints which Nature herself teaches, and to transplant every kind in its *season of rest*, which is very different, indeed, according to the different kinds, in spring, summer and fall, but *invariably when the plant has ripened its fruit*. At that period all its juices are at rest, and the plant, being in a sleeping state, may easily be treated as the gardener wishes.

Accordingly, the ensuing *fall*, as soon as the trees dropped their leaves, I began to root-graft the same kinds as before, and planted them directly out in nursery rows, protecting them with dry leaves, covered with pine twigs, in order that the wind should not blow them away. As I wished to keep the ground open for further planting, I also covered some beds in the same manner.

In this way I continued root-grafting and planting, till towards Christmas, when the winter set in. Though it was rather a severe winter, and there was but very little snow, I found my grafts in spring in excellent condition. Even roses, filberts and Madeira nuts had taken rapidly, but the black-English mulberries were lost, and it seems that this kind of fruit would not endure root-grafting, though I *sometimes* succeeded in grafting them on growing stocks of white mulberries in spring.

As several ornamental shrubs begin to grow so early in spring, as to render it very difficult to root-graft or transplant them at that season, with-

out injuring them, I applied the same method to *Cydonia japonica*, (the Japan Quince,) *Daphne indicia*, and others, with very good success, grafting the first on hawthorn and quince roots, the latter on the common Mezereum.

The ensuing fall, 1836, I grafted filberts and Cosford nuts, several roses, including *Rosa cristata*, *Duchesse d'Angouleme*, *Queen of Denmark*, and others, on stems two and three feet high, covering them by tying straw around them. They endured the winter very well, and some of the roses flowered the first summer. In October following, I procured two plants of the tree *Pæonias arborea* and *papaveracea*. Both having but very poor roots, I was obliged to cut off the tops, and being desirous to save them, I grafted those scions on some bulbs of the common Red Pæony, (*P. officinalis*), planted them in a proper soil, and, at the approach of winter, covered them with about three inches of peat. In April I removed the peat, and found the plants all in excellent condition. On the 26th of October last, I grafted six scions of *Pæonia arborea* on common Pæony tubers in the garden at this place, and they now appear very healthy. I have tried cleft as well as whip-grafting, on roots with equal success.

In all fall grafting, I tie the grafts very fast, leaving a bud on the scion only a quarter of an inch from its lower end, and on planting out, I place this bud just below the surface. I leave two buds more on the scion, but place the most confidence on the lower bud. I cover the whole wound with melted grafting wax, as also the top of the scion, to keep air and moisture from them. I like spring grafting on growing trees; but as it is desirable to extend the season for propagating as much as possible, I shall greatly prefer, according to my own experience, and for many other reasons, to perform my root-grafting in the autumn.

BUDDING is so well described in your work on the "Fruits and Fruits trees of America," that nothing valuable could be added to that description. Very little, however, is said of *spring budding*, and I hope therefore, it may not be amiss, if, in a few words, I give my experience on this method of budding; and why budding should not do as well in May as August?

Many years ago I met with an account of budding roses in spring, in a German gardening journal, (*Weissensee Blumenzeitung*, if my memory serves me, for 1832,) and tried it directly. According to the directions I commenced in March, before the bark would peel, by cutting out buds with a small piece of wood, making a similar cut on the stock, inserting the buds so that the inner bark of bud and stock should exactly correspond, and tying them firmly together. This was more properly *bud-grafting* than real budding; but I continued my experiments till the middle of May, and as soon as the bark would peel, I inserted my buds in the common way.

It was somewhat difficult to insert the buds well, as there was no stalk or leaf stem to take hold of. I therefore took a drop of grafting wax on the point of a finger, to which I made the bark of the bud, as soon as cut, adhere, and performed the operation very easily. I tied it, as I always do, with two strings of mats, and as the spring winds in my native country are very dry, I covered all, even the bud itself, with grafting wax, put on with a brush, in a melted state. My spring budded roses were growing very rapidly, and some of them were flowering the first summer. I tried it also with great success on *Madeira Nuts*, *Peaches*, *Black English Mulberries*, *Weeping Ashes*, and *Weeping Roses*. They all ripened their wood sufficiently to stand the following winter well. As I gained a year by this method of budding, and in other respects was very well satisfied with it, I have always since that time continued to perform spring budding, as well as fall grafting.

MARCH, 1847.

The Curculio.

A new remedy, for the *Curculio*, and one, says the Ohio Cultivator, that to our mind affords promise of more utility than any other within our knowledge, was made known to us recently by our friend Gen. J. T. Worthington, who informed us that it had been practised with much success by one or more fruit growers at Chillicothe. Take a number (one for each tree) of tubs, or boxes, that will hold an inch or two of water in the bottom; whitewash the inside, and place them under the trees—if elevated on a barrel or by other means, so as to bring it near the lower branches, all the better; then pour in water so as to cover the bottom an inch or more in depth, and in the dusk of the evening when the *Curculios* begin to appear, set a lighted candle or lamp in the middle of the tub or box, letting it remain for two or three hours or longer, each evening, during the period the insects are flying, which is found to be but a very few days.

The light and reflection from the whitewashed sides attract the insects into the tub, and falling into the water they are unable to crawl out.—Hundreds have been caught in this way, in a single night, during the time of their thickest flight. The remedy would probably be more effectual, if the trees were to be shook or suddenly jarred occasionally, during the evenings when the insects are most numerous.

Recipe for the Sweeney in Horses.—Take one quart of upshot whisky, or fourth proof brandy, two ounces gum camphor, two ounces ground cloves, nine pods red pepper, one table spoonful alum salt. Let it stand twenty-four hours; then rub the affected parts three times in twenty-four hours. When the first quart is used, put a quart of brandy or whiskey on the grounds, and use as before.

A few Suggestions to Cheese-Makers.

For general directions in the process of cheese-making, we refer the reader to an excellent article in No. 1 of our last volume, written by "A Dairy-Woman of Herkimer County." There are some additional suggestions of importance, which we find in a prize essay describing the method practiced in making the celebrated English Cheshire Cheese, which we will here subjoin.

A very important point in Cheese-Making, is *the temperature of the milk when set*. If this be too high, the curd will indeed "come" quicker, but both the quality and quantity of the cheese are deteriorated; if too low, the curd is so long in gathering and compacting, that risk is incurred of its becoming sour, and the cheese when made, has, besides, a tendency to green mould. From the careful observations of the author of the essay, it appears that the temperature at which milk is commonly set in the best dairies is between 80 and 85 degrees. This point can, of course, only be precisely determined by a thermometer. In American dairies, a much higher temperature is generally adopted—commonly from 90 to 96 degrees; and to this difference, may, we think, in part be ascribed the admitted superiority of Cheshire cheese.

The proper quantity of rennet can be best ascertained by observing the time required for the milk to coagulate: since the stronger the rennet, the quicker the coagulation, the temperature being the same. Sufficient rennet is used to bring the cheese in about an hour and a quarter. The consequence of putting in too much rennet is, that an unpleasant flavor or bitterness is thereby imparted to the cheese, and hence the importance of using only just sufficient to answer the desired purpose. The flavor also suffers when rennets are employed which have not sufficient age; eight or ten months is as little as is admissible—a year is better. The curd is brought to a fit state for breaking, when the color of the whey is a pale green, and separates distinctly from the curd on a slight pressure.

The quantity of salt used, is 1 lb. to from 40 to 45 lbs. of dried cheese; or on an average, 1 lb. to 45 lbs. of curd. From an experiment made at the suggestion of the writer of the essay, he is of opinion that a less quantity—say $\frac{1}{2}$ lb. salt to 42 lbs. curd—would cause an improvement in quality.

The gradual pressure of the curd, when put in press, very light at first, and increased as the cheese becomes dryer, is much regarded; for, if this is not attended to, a considerable quantity of butyraceous or oily matter is forced out, and the richness of the cheese diminished.

The greatest difference in the process pursued by English and American cheese-makers, appears to consist in *the length of time the cheese is pressed*. In America, this is seldom more than 24 hours; in Cheshire, it is continued usually four days, and in some dairies longer, the cheese being repeatedly turned. One great obstacle to the sale of American cheese in the English market, is this deficiency in pressing, by which, it is complained, the keeping qualities of the cheese are impaired.

The quantity of saleable cheese produced from a gallon of milk, supposing little or no cream has been taken from it, is one pound. In autumn, there is more curd from the same quantity of milk than at any other part of the season.

The Wool Market.

The coming clip will, in all probability, exceed that of any previous year, and in view of the increasing supplies of the article, it behooves the wool-grower to adopt every means in his power to *make the best of the market*. It is a fact well known to all who are at all acquainted with the wool trade, that a great depreciation is often sustained in price, from circumstances independent of fineness or quality of fleece.

One of these circumstances is *the slovenly manner in which the fleece is put up*. From the nature of the article, it is difficult to determine whether all is as it should be in this respect, until it reaches the hands of the manufacturer. If he finds that he is liable to purchase fleeces, loaded with tag-locks and other impurities, he will set his price low enough to compensate not only for the decrease of weight, but for the trouble, expense, and loss of time incurred in fitting the wool for working. The practice, therefore, with the wool-grower, of selling his wool in bad condition, is a suicidal one, so far as the price of the commodity in our home market is concerned. But as the quantity increases beyond the demands of our own manufacturers, a foreign market, especially that of England, will become important; and there, the too prevalent method of doing up the fleece, would effectually exclude us from any

fair share in the competition. Another circumstance that prevents the realizing of a fair price, is that *the right quality is not sent to the right market.* The manufacturer of fine broadcloths wants one quality; of mousselin de laines, another; of satinet another. But as wool is commonly sent to market without stapling, each of these manufacturers has to buy a great deal of wool not suitable for his purpose, in order to lay in a supply of that which is. This causes a great and useless outlay of capital, diminishing thus the profits of the whole investment. It is true that the different manufacturers can, to some extent, effect an exchange of this useless surplus stock among themselves;—but for the expense and trouble of this operation, as well as that of sorting out the different kinds, the wool-grower must expect to pay—and pay roundly. If a large flock-master, raising wool of a homogeneous quality, would ascertain the manufactory at which his particular description of wool is wanted, and take it there; or if several individuals, raising similar wool, would combine and depute one of their number to market the whole, with a like regard to suiting the market with the commodity, it is believed much advantage would generally result.

As it is at present, wool is for the most part, bought in this state by those who are not good judges of the article, and who do not make the proper distinction between different grades. If, however, they give rather too high a price for coarse or medium wool, they make it up by paying too low a one for fine, so that in the end, *they* are not the losers. The discrimination between coarse and fine wools is understood by the stapler, and in his hands a difference of one-fourth or even one-third is sometimes made between fleeces bought at the same price. He makes ten sorts, and while there is a difference of only three or four cents a pound in the lowest of these divisions, in the highest it rises to eight or ten cents.

One essential point for the procurement of a good price, is *acquiring a character in the market.* This consideration may apply to individuals, neighborhoods, and states. In a commodity in which fraud is so easily practiced, and carelessness so easily concealed, it is obvious the purchaser could afford a liberal recompense, simply for the assurance that in buying any lot, he would find all right. The importance of *character* in this business can be judged of by the fact, that while the market price of wool of a certain qual-

ity is at 40 to 45 cents per lb., certain well known flockmasters obtain from 60 to 70 cents—and that for fleeces of the same, or nearly the same quality.

It is to be hoped that the wool-growers of Michigan—and this title may soon embrace nearly every farmer—will see to it, one and all, that the character of Michigan wool does not suffer at their hands. As a state, we are just beginning to make this, an important article of export. It depends upon the quality of our exportation now, whether this article is to receive for years to come, a fair price in the eastern markets, or whether it is to be depressed 20 or 30 per cent below its proper value, *by a bad name.*

The Curculio.



We here present an engraving of a depredator which is beginning to produce serious loss in some of the longer settled parts of the state, and especially in the gardens of this city. The cut is taken from life, and is a good likeness. No one

who examines it will have any difficulty in recognizing the original. There is, however, this difference—that the latter is not quite so large as his portrait.

This insect chiefly infests the stone fruits,—the plum, nectarine, apricot, cherry and peach. About the time the young fruit attains the size of a pea, the curculio begins its work of destruction, which it continues till autumn. It makes a small crescent shaped incision in the fruit, as shown in the cut, and lays its egg in the opening. The egg soon hatches into a small white larva, which feeds upon the fruit, causing, usually, its premature fall to the ground. Soon after the fall of the fruit the larva makes its way into the earth, where it remains till it is transformed into the perfect insect, to lay its eggs and perpetuate its race.

Among remedies, may be mentioned that of placing hens, with broods of chickens, beneath the trees. Fowls consider the curculio a dainty morsel, and intercept them as they come out of the ground, before they have attained strength sufficient to take to their wings, or ascend the tree. Some persons suspend among the branches, bottles of sweetened water, which the insects are said to enter and become entrapped.

It would be well for fruit-growers in the interior, to keep a lookout for the appearance of this insect in their yards. By spreading sheets in the morning under the trees, and suddenly jarring them, the curculios, if present, will be dislodged and fall. They then roll themselves up, and appear as motionless black balls. In this state, they can be gathered in the sheets, and thrown into the fire.

Cheese-Making, Management of Cows, &c.

BY B. C. G.

FRIEND HURLEUT:—J. F. J. of Lapeer Co., wishes some general information about cheese-making. I am entirely unacquainted with any process by which whole shelves of cheese are turned at once! but will give you my method, and that of a number of good dairy men in this county, of heating milk, and scalding the curd, which is very much thought of by those who have tried it.

I have a boiler holding nearly three pails, to raise steam. This is used on an old cook-stove which we had no other use for. The appurtenances are, a wooden lid, to fit tight and well fastened down,—a short joint of wooden pipe fitted into the cover,—another wooden pipe long enough to carry the steam from your kettle to the cheese tub or vat, to which should be attached an elbow to carry the steam in near the bottom. My long pipe is about seven feet, as we do not wish the tub to stand nearer the stove than that. Then we have another short pipe to carry the steam into a tub of water after the milk is warmed and before the curd is ready, by which time we have a tub of scalding water for washing milk-pails, &c. After the curd has come, and before we put the steam in, we dip off half the whey, then turn in the steam, and in breaking up the curd, keep it in very gentle motion, so that it shall not scald too much about the pipe. Where the long pipe sets on to the one fast in the kettle cover, it need not be fastened: just let the latter fit in like a plug, and it will stay. My pipes, and fitting of cover, cost me at the pump-makers one dollar and a half. This is the cheapest, and most labor-saving way with which I am acquainted, and does the business the best. If a man has a kettle set in an arch and is at work the old way, so much the better,—he is nearly rigged to go by steam. All he has to do, is, to fit a cover on his kettle, and get his steam pipes. Wood is best, it being never hot to handle.

Mr. Belding gives, no doubt, a very good receipt to make cows clean after calving; and as I have great faith in another, will send it. As soon as your cow begins to spring bag, give her two quarts of meal per day, till calving; and finally, as much, or more, from that time till she can get a full bite of grass. As soon as she calves, give a pail of warm bran slop, with a handful of ashes. If cows are well thriving at the time they calve, there will be no trouble about cleaning, one time in a hundred. If any one thinks this too expensive medicine, let him remember if he starves his cow, she will starve him. I know some think, or pretend to think, a cow is better poorly wintered, and colts are better to run to a stack, and have no shelter or grain: but I can tell them that a colt kept in comfortable quarters, with enough to eat of scalded oats, bran, &c., for the first two winters, will be one year ahead, and always a better horse

than if he gets his living by hook and by crook, always poor, always a thief, and seldom a first rate horse. This starving animals for profit, is a great loss,—and no fun in it. B. C. G.

Watertown, N. Y., May 14, 1847.

Cheese-Houses.

A Herkimer county (N. Y.) correspondent writes:—"The largest and best dairy houses here are nothing more than an unfinished building inside, and planked and clapboarded outside, with very little light except when the doors are open. Some have blinds to turn, so that the air can circulate through the room occasionally. They have no shelves, but tables, nearly the length of the building, say 3½ feet wide, or according to the size of the cheeses, so as to contain two abreast; and the tables so far distant from each other as to pass between them to turn the cheeses by hand, and sufficiently high to be convenient. Such are the best cheese-houses I have seen."

From the Maine Farmer.

Premiums on Wool.

The depression in the price of wool which has taken place within a few years from various causes, has had the effect to rouse up the more energetic wool-growers of the United States, and to bring them together in a way which will ensure a better understanding, not only of their particular business, but also a unity and concert of action that will put their business on a better basis for the future.

We are happy to see this spirit among the wool-growers of the Union. They compose a highly important portion of the productive class, and the article which they produce, while it is one of prime necessity, constitutes a great item in the commerce of the people.

It is with pleasure that we see more evidences of the determination of wool-growers to excite laudable emulation in growing a good article, and in putting it up in the very first order. Some generous and public spirited persons have contributed funds to constitute premiums for this purpose. A friend has furnished us with the following notice, to which we cheerfully give publicity, as follows:

TO WOOL GROWERS.

Numerous liberal minded persons, interested in the wool business, having placed funds at our disposal for the purpose hereinafter mentioned, we shall, on the first day of October next, award and pay the following premiums, viz:

Ten Gold Medals, worth ten dollars each, for the ten entire clips of the most valuable fleeces for clothing purposes.

Ten Gold Medals, worth ten dollars each, for

the ten entire clips of most valuable fleeces for combing or worsted purposes.

Ten premiums, of Ten Dollars each, for the ten best conditioned entire clips of Saxony wool.

Ten premiums, of same amount, for the ten best conditioned entire clips of Merino wool.

Ten premiums, of same amount, for the ten best conditioned entire clips of Merino grade wool.

Ten premiums, of same amount, for the ten best conditioned entire clips for combing fleeces.

All wool-growers throughout the United States are invited to compete for them.

All bales of wool designed for our care should have the name of the owner or grower plainly written or printed on them in full, together with our address as follows: PERKINS & BROWN, *Springfield, Mass.*

All lots of wool intended to compete for the premiums, should reach us by the first of August next. Growers may receive premiums, if their wool be put up and marked separately, even tho' their wool come through the merchant or other wool-dealer. Any farther contributions from wool-growers, or other public spirited persons, will be expended in preparing the medals, publishing a report, and in additional premiums. All Editors of periodicals throughout the U. States, friendly to agricultural pursuits, are respectfully requested to publish.

PERKINS & BROWN.

Springfield, Mass., April, 1847.

The Horse.

[Dr. Warren, in a lecture lately delivered in Boston, on the anatomy of the horse, made the following remarks in relation to some points of management, &c. :]

One of the diseases of the horse, called staggers, he described as a species of apoplexy, produced by feeding in the same manner when without exercise, as when in an active state. A horse requires about four hours exercise in a day, in order to preserve bodily health. The horses sent from the city to the country to winter, generally thrive better than those kept in an inactive state in the city, notwithstanding the former have harder fare. The stalls in which horses are kept are generally too small. The horse should have a stall six or seven feet square, in order that he may have plenty of room for exercise. It is an excellent practice to put up bars to keep the horse in, take off the halter, and let him move about in his stall freely.

It is generally the custom to keep the horse in a state of starvation, when, after working, he perspires freely. Dr. Warren, however, said that when in this state they were in a good condition to receive a small quantity of food. When a horse has worked a long time without drinking, it is an excellent practice to allow him to drink

a quantity of warm water, which will not injure him.

In conclusion, Dr. Warren alluded to the pernicious custom which prevails, of driving horses with a check rein, which custom deprives the animal of that use of the head which Nature destined for it. It also operates injuriously on the muscles of the neck, and prevents a horse from drawing as much as he could without this impediment. A good illustration of this is given in the fact that a horse will draw a heavier load up hill with a little boy, or some light weight, on his fore shoulders, than he can without this weight. The reason of this is that the weight is thrown forward, causing the horse to hold his head down, and apply his strength to the best advantage.—Hence we see that a horse always drops his head when drawing great weights.

MR. HURLBUT:—If you think the following recipes worth publishing for the benefit of your lady readers, they are at your service :

Potatoe Soup.—Slice six middling sized potatoes and two onions in two quarts of water, and boil them till done ; then add one quart of milk scalding hot, and a few bits of dry bread crumbled fine, if you have them ; if not, add a table spoonful of flour wet with half a tea-cup full of water. Let it boil two or three minutes, salt and pepper it to your taste. Put a lump of butter of the size of a large egg in your tureen, and pour the soup on it ; and you will have a delicious and economical dish, which can at any time be prepared at half an hour's notice.

Substitute for Yeast.—Having often found it difficult to procure good yeast or sour cream to mix bread, biscuit, &c. with, I have tried the following and find it equally as good and much more convenient : Stir up flour with water in a stone jar to the consistency of very thick batter, add a little yeast, cover it tight, and set it aside till it sours : then, when you want to make bread, sift your flour into a pan, pour some of your batter in with it, add saleratus enough to sweeten it, knead it up as you would any bread, and it is ready for the oven. By adding a little shortening, it makes excellent biscuit, and with shortening and a little sugar, it makes fine doughnuts. Bake or fry immediately. It is also equally as good for pan-cakes, as batter mixed with buttermilk or sour cream. By adding more flour and water as you use from it, it will keep in cool weather a long time.

MARY.

The Spinning Wheel in Paris.—Spinning is now all the fashion among the Parisian ladies. It was introduced by the Duchess of Orleans, whose wheel is ivory, ornamented with gold and ebony; and this year wheels have been offered as New Year's gifts to many elegant young ladies.

How to make Remittances.

As many of our subscribers seem to be at a loss how they are to send such a sum as fifty cents, we would mention that by a late alteration in the P. O. Law, the franking privilege is restored to all Postmasters whose last years' income from their offices was less than \$200. The great majority of Postmasters, therefore, can, and of course will, forward a remittance free,—and it can be done at our risk.

Premium Volumes.

In our terms, we have offered a copy of Volume I, II, or IV, together with two copies of the present Volume, to any person sending us \$1, postpaid, or franked by a Postmaster. Volume I is now exhausted; but we can continue to furnish volume Two or Four according to the above terms, as heretofore.

Market Intelligence.

DETROIT, May 28.

FLOUR.—Since our last, flour has been, on the whole, pretty steadily advancing, until for the last two days, it has reached \$6.50 on board, and \$6.25 @ \$6.44 in the streets. At the same time, the prices of freight have advanced to 35 and 37c on the lake, and \$1.50 from Buffalo to Albany by canal. The arrivals by wagons and cars have of late been so brisk as nearly to keep up with the quantity taken off, so that the burthened state of the warehouses still in good degree continues.

WOOL.—There appears reason to believe that the clip of the present season will bring quite as high a price, as that of last year did at the corresponding period. Some fleeces of medium quality, and in rather poor condition, have been brought in, and sold at 18c. This low figure, we trust, is not to be taken as a criterion of the market. The price, it is thought, will generally range from 20 to 25c. In Buffalo, 25th inst. the quotation is 15 to 30c.

NEW YORK, May 25.

FLOUR, \$8.75. Yellow corn, \$1.10 @ \$1.15. Rye, \$1.45 @ \$1.47.

The foreign demand for breadstuffs continues unabated, and little doubt remains that the deficiency among the crowded millions of western Europe will exhaust the stores, vast as they are, of the United States and Russia, from which supplies are chiefly looked for. Advices from Europe warn us to expect a continuance of the destitution the ensuing year, and urge us to sow and plant as broadly as possible, to be prepared to meet the anticipated exigency. There is thought to be no reason to expect that the great cause of demand, the potato disease, will diminish its ravages the ensuing year; but, on the contrary, many anticipate its wider spread, and with increased virulence.

NEW YORK WOOL MARKET.—May 19th.

Saxony fleeces, 40 @ 45c; Full blood Merino, 35 @ 38; $\frac{1}{2}$ do, 32c; $\frac{1}{4}$ do, 30c; $\frac{1}{8}$ do, 25 @ 27; Superfine pulled, 30 @ 31.

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Our Exchanges.

Many of these are not yet directed to our new place of publication, and reach us quite irregularly or not at all. Will the Publishers do us the favor to see that the direction is changed from Jackson to Detroit?

HARRISON'S IMPROVED SHOVEL-POINTED CULTIVATORS.

Number 2.

Number 1, is a first rate article to use in the corn-field, instead of the plow and hoe.

Number 2, will answer the same purpose, and for cross plowing with a single horse.

Number 3, will supersede the necessity of having a cross plow or a drag. This answers the purpose of both.

Those who farm it on the improved methods, will find these cultivators a vast improvement. I have tried them sufficiently to satisfy me in regard to their value.

JONATHAN LAMB.

Waterloo, March 30, 1847.

The advantages of this unrivalled cultivator, have the past season, been fully and faithfully tested, and it is by common consent, admitted to be by far the best cultivator now in use. They are manufactured at Blissfield, Lenawee County, Michigan, and can be obtained at reasonable prices at Monroe, Adrian, Jackson, Maumee, and most of the towns in Michigan, and Western Ohio. Jonathan Lamb, of Waterloo, Jackson County, is the regularly authorized agent for selling the rights to manufacture said cultivator for the Western States.

ALMOND HARRISON.

Blissfield, April 3, 1847.

MICHIGAN FARMER.
VOLUME V.—NEW SERIES.

PUBLISHED BY WILLIAMS AND HURLBUT, DETROIT.

H. HURLBUT, EDITOR.

TERMS.—One copy for 50 cents—Five copies for \$2—Eight copies for \$3—and at this last rate for any larger number; payable in advance. Subscriptions commence with the volume. Letters containing remittances in current bank bills may be sent at the risk and expense of the publishers.

PREMIUMS.—Any person sending \$1, post paid, shall receive two copies of Volume V., and a copy of Volume II or IV, at his option.

A remittance of \$5 shall entitle the sender to twelve copies of Volume V., and one copy of Volume II and IV each; or thirteen copies of Volume V., and a copy of Volume IV. The premiums will be sent by mail unless otherwise ordered, and will be subject only to newspaper postage.